FEASIBILITY STUDY

Lumberton

Widening of I-95
from US 74 (Exit 14) to US 301 (Exit 22)

Robeson County

Division 6

I-3806

Prepared by the
Program Development Branch
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I. General Description

This preliminary study describes the proposed widening of I-95 from US 74 (Exit 14) to US 301 (Exit 22) in Lumberton. The project location is shown on Figure 1. The total project length is approximately 7.8 miles (12.6 km). I-95 in this location provides two through lanes in each direction of travel. Two cross-sections were studied. Alternate 1 will provide 4 through lanes in each direction and Alternate 2 will provide 3 through lanes in each direction. The typical section for these alternates is shown on Figure 2. **Alternate 1 is the recommended alternate.**

The recommended improvements include installation of concrete median barrier and glare screen, replacement of the bridges over the CSX Railroad, replacement of the northbound bridge over the Lumber River, replacement of the SR 1536 bridge over I-95, replacement of the US 301 bridge over I-95, and upgrading of all signing.

In addition to the improvements described above, The NC 72 bridge will be replaced under Project U-2416, the NC 211 bridge will be replaced under Project U-2415, and the southbound bridge over the Lumber River will be replaced under Project I-2305. Concrete median barrier from approximately 2,100 feet (640 m) south of NC 72 to the north project terminus will be provided under Project I-2305.

All of the proposed bridges mentioned above will accommodate 8 through lanes on I-95. Recommendations regarding the structures within the project limits are summarized in Table 1 following, and the data for the bridges is shown in Table 2 following.

The recommended right-of-way width for the 8-lane cross-section is 300 feet (91.5 m). For the 8-lane cross-section, 3 residential and 2 business relocations are anticipated. The total project cost including construction and right of way is estimated to be $ 69,700,000 as follows:

Right-of-Way	.....	$ 16,900,000
Construction	.....	$ 52,800,000
Total Cost	.....	$ 69,700,000

Table 1. Structure Recommendations

BRIDGE NO.	LOCATION	ACTION	PROPOSED WIDTH	PROPOSED LENGTH	TIP NUMBER
144	I-95 NB over CSX RR	Replace	153 ft. (46.6 m) Includes #145	230 ft. (70.1 m) Includes #145	I-3806
145	I-95 SB over CSX RR	Replace	N/A	N/A	I-3806
146	I-95 NB over Lumber River	Replace	153 ft. (46.6 m) Includes #147	378 ft. (115.2 m) Includes #147	I-3806
147	I-95 SB over Lumber River	Replace	76.5 ft. (23.3 m)	378 ft, (115.2 m)	I-2305
148	SR 1536 over I-95	Replace	63 ft. (19.2 m)	260 ft. (79.3 m)	I-3806
036	US 301 over I-95	Replace	67 ft. (20.4 m)	270 ft. (82.3 m)	I-3806
025	NC 72 over I-95	Replace	92 ft. (28.0 m)	266 ft. (81.1 m)	U-2416
102	NC 211 over I-95	Replace	95 ft. (29.0 m)	272 ft. (82.9 m)	U-2415

Table 2. Bridge Data

BRIDGE NO.	LOCATION	YEAR BUILT	SUFFICIENCY RATING	EXISTING WIDTH	EXISTING LENGTH
144	I-95 NB over CSX RR	1955	64.5	31.3 ft. (9.5 m)	230 ft. (70 m)
145	I-95 SB over CSX RR	1955	76.9	31.3 ft. (9.5 m)	230 ft. (70 m)
146	I-95 NB over Lumber River	1955	58.0	31.5 ft (9.6 m)	380 ft. (116 m)
147	I-95 SB over Lumber River	1955	65.5	31.5 ft. (9.6 m)	379 ft (116 m)
148	SR 1536 over I-95	1955	62.0	31.4 ft. (9.6 m)	226 ft (69 m)
036	US 301 over I-95	1959	57.5	31.5 ft. (9.6 m)	260 ft. (79 m)
025	NC 72 over I-95	1955	75.0	43.3 ft. (13.2)	200 ft. (61 m)
102	NC 211 over I-95	1955	60.8	31.3 ft. (9.5 m)	214 ft. (65 m)

This study is the initial step in the planning and design process and is not the product of exhaustive environmental or design investigations. The purpose of this study is to describe the needs, recommend a treatment including costs, and identify potential problem areas that may require consideration in the planning and design phases.

II. Need for the Project

The purpose of the project is to increase the capacity and safety of I-95 within the project limits. I-95 is a Freeway on the Lumberton Thoroughfare Plan and is an Urban Interstate in the North Carolina Statewide Functional Classification System.

Access in the project corridor is fully controlled. In addition to the interchanges at the project termini, there are interchanges at NC 72, SR 1536, and NC 211. Existing I-95 provides 2 through lanes in each direction of travel. There are 2-lane service roads on each side of I-95. The existing right-of-way width appears to be approximately 260 feet (79.2 m).

Traffic volume estimates for I-95 for the years 1997 and 2025 are 51,200 vehicles per day (vpd) and 94,400 vpd, respectively. The Level of Service (LOS) without the proposed improvements is estimated to be LOS D in 1997 and LOS F in 2025. With the 6-lane cross-section the estimated LOS is LOS C in 1997 and LOS E in 2025. With the 8-lane cross-section the estimated LOS is B in 1997 and LOS D in 2025.

During the three year period beginning November 1, 1994, and ending October 30, 1997, there were 137 accidents reported on I-95 within the project limits. This resulted in a total accident rate of 40 accidents per 100 million vehicle miles (ACC/100MVM). This compares with the statewide average of 152 ACC/100MVM for all Urban Interstate routes in North Carolina for 1996.

There were five fatal accidents reported, and 63 accidents resulted in 107 non-fatal injuries. The most prevalent type of accidents were ran-off-road (45%), rear-end (15%), and sideswipe (15%). The proposed wider cross-section with additional through lanes would reduce the potential for these types of accidents.

III. Recommendations

It is recommended to widen I-95 from US 74 (Exit 14) to US 301 (Exit 22) in Lumberton. The project location is shown on Figure 1. The total project length is approximately 7.8 miles (12.6 km). Existing I-95 in this location provides two through lanes in each direction of travel. Two cross-sections were studied. Alternate 1 will provide 4 through lanes in each direction and Alternate 2 will provide 3 through lanes in each direction. The typical section for these alternates is shown on Figure 2. **Alternate 1, the 8-lane cross-section, is recommended.**

The improvements include installation of concrete median barrier and glare screen, replacement of the bridges over the CSX Railroad, replacement of the northbound bridge over the Lumber River, replacement of the SR 1536 bridge over I-95, replacement of the US 301 bridge over I-95, and upgrading of all signing.

In addition to the improvements described above, the NC 72 bridge will be replaced under Project U-2416, the NC 211 bridge will be replaced under Project U-2415, and the southbound bridge over the Lumber River will be replaced under Project I-2305. Concrete median barrier from approximately 2,100 feet (640 m) south of NC 72 to the north project terminus will be provided under Project I-2305. Recommendations regarding the structures within the project limits are summarized in Table 1, and bridge data for the bridges is shown in Table 2.

The recommended right-of-way width for the 8-lane cross-section is 300 feet (91.5 m). For the 8-lane cross-section, 3 residential and 2 business relocations are anticipated. The total project cost including construction and right of way is estimated to be $ 69,700,000 as follows:

Right-of-Way	.....	$ 16,900,000
Construction	.....	52,800,000
Total Cost	.....	$ 69,700,000

IV. Other Comments

The recommended right-of-way width for the 6-lane cross-section is 280 feet (85.4 m). For the 6-lane cross-section, no residential or business relocations are anticipated. The total project cost including construction and right of way is estimated to be $ 52,600,000 as follows:

Right-of-Way	.....	$ 11,900,000
Construction	.....	40,700,000
Total Cost	.....	$ 52,600,000

An environmental screening was not conducted for this study. No historic properties, recreation areas, or endangered species have been identified in the project corridor. Approximately one half acre of wetlands is estimated to be impacted by this project and no cost for wetland mitigation has been included in the cost estimate.